

TCAGCAGGTCATGACATCATCACAGAACAGCCACGGTCACAGCACACTGCAGGCGGACTCAGTGGATC
 TGGCCAGCTGTGACTTGACAAGCTCTGCCACTGATGGGGATGAGGAGGATATCTTGAGCCACAGCTCCAG
 CCAGGTCAGCGCCGTCCCATCTGACCCTGCCATGGACCTGAATGATGGGACCCAGGCCTCGTCGCCCATC
 AGCGACAGCTCCCAGACCACCACCGAAGGGCCTGATTAGCTGTTACCCCTTCAGACAGTTCTGAAATTTG
 TGTTAGACGGTACCGACAACCAGTATTTGGGCCTGCAGATTGGACAGCCCAGGATGAAGATGAGGAAGC
 CACAGGTATTCTCTGATGAAGCCTCGGAGGCCTTCAGGAAGCTTCCATGGCCCTTCAACAGGCACAT
 TTATTGAAAAACATGATCACTGCAGGCAGCCTTCTGACAGCAGTGTGATAAAATTTGTGTTGAGAGATG
 AAGCTACTGAACCGGGTATCAAGAAAAAAGCCTTGCCGCATCAAAGGTGACATTTGGACAGTCCACTGA
 TGATGACTCTGCACCTCTTGTCATTGTGTCCGCCTTTTATCTGCTTCGTTTTTGCTAACAGGGGAAAA
 AATGTGCTGGTCCGGACAGGGATGTGAGGGTCAGCGTGAAGGCCTGGCCCTCAGCTGTGTGGGAGCAG
 CTGTGGCCCTCCACCCGAATCTTTCTTTCAGCAAATCTATAAAGTTCTCTTGACACCACGGAATACCC
 TGAGGAACAGTATGTCTCAGACATCTTGAACACATCGATCATGGAGACCCACAGGTTTCGAGGAGCCACT
 GCCATTCTCTGTGGACCCTCATCTGCTCCATCCTCAGCAGGTCGCGCTTCCACGTGGGAGATTGGATGG
 GCACATTAGAACCCTCACAGGAAATACATTTTCTTTGGCGGATTGCATTCTTTGCTGCGGAAAACT
 GAAGGATGAGTCTTCTGTTACTTGAAGTTAGCTTGTACAGCTGTGAGGAACTGTGTGATGAGTCTCTGC
 AGCAGCAGCTACAGTGAAGTAGGACTGCAGCTGATCATCGATGTGCTGACTCTGAGGAACAGTTCCTATT
 GGCTGGTGAGGACAGAGCTTCTGGAAACCTTGCAGAGATTGACTTCAGGCTGGTGAGCTTTTTGGAGGC
 AAAAGCAGAAAATACACAGAGGGGCTCATATTATACAGGGCTTTAAAAGTCAAGAACGAGTGCTC
 AATAATGTTGTCATCCATTTGCTTGGAGATGAAGACCCAGGGTGCAGATGTTGCCGCAGCATCACTAA
 TTAGGCTTGTCACAAAGCTGTTTTATAAATGTGACCAAGGACAAGCTGATCCAGTAGTGGCCGTGGCAAG
 AGATCAAAGCAGTGTTCACCTGAACTTCTCATGATGAGACGCAGCCTCCATCTCATTTCTCCGTGAGC
 ACAATAACCAGAATATATAGAGGCTATAACCTACTACCAAGCATAACAGACGTCATATGGAAAAAATACC
 TTTCAAGAGTTATTGCAGCAGTTTCTCATGAACATAACACATCAACCACAGAGCAGTCAATGTTGGATG
 CTGTGAAGCTTTGTGCTTCTTTCCACTGCCTTCCAGTTTGCATTTGGAGTTTAGGTTGGCACTGTGGA
 GTGCCCTCACTGAGTGCCTCAGATGAGTCTAGGAAGAGCTGTACCGTTGGGATGGCCACAATGATTCTGA
 CCCTGCTCTCGTCAGCTTGGTCCATTGGATCTCTCAGCCATCAAGATGCTTTGATTTGGCCGAAAA
 CTTGCTTGAGCCAGTGTCCCAATCTCTGAGAAGTTTCAAGGCTTGAAGAAGAAGCAACCCAGCA
 GCCACCAAGCAAGAGGAGGTCTGGCCAGCCCTGGGGACCGGGCCCTGGTGGCCATGGTGGAGCAGCTCT
 TCTCTCACCTGCTGAAGGTGATTAACATTTGTGCCACGCTCTGGATGACGTGGCTCTGGACCCGCAAT
 AAAGGCAGCCTTGCTTCTCAACAACCCCTTCTCTAAGTCCATCCGACGAAAGGGGAAGGAGAAA
 GAACCAGGAGAACAAGCATCTGTACCGTTGAGTCCAAGAAAGGCAGTGAGGCCAGTGCAGCTTCTAGAC
 AATCTGATACCTCAGGCTCTGTTACAACAAGTAAATCCTCATCACTGGGGAGTTTCTATCATCTTCTCTC
 ATACCTCAAACATGATGATGTCCTGAAAGCTACACACGCTAACTACAAGGTACAGCTGGATCTTCAGAAC
 AGCACGGAAAAAGTTGGAGGGTTTCTCCGCTCAGCCTTGGATGTTCTTTCTCAGATACTAGAGCTGGCCA
 CACTGCAGGACATTGGGAAGTGTGTTGAAGAGATCCTAGGATACCTGAAATCCTGCTTTAGTCGAGAACC
 AATGATGGCAACTGTTTGTGTTCAACAATTGTTGAAGACTCTCTTTGGCACAACCTTGGCCCTCCAGTTT
 GATGGCTTATCTTCAACCCAGCAAGTCAAGGCGGAGCACAGCGCCTGGCTCCTCCAGTGTGAGGC
 CAGGCTTGTACCACTACTGCTTTCATGGCCCGTACACCCACTTCAACCCAGGCCCTCGTGCAGCCAGCCT
 GAGGAACATGGTGCAGGCGGAGCAGGAGAACGACACCTCGGGATGGTTTGTGTCCTCCAGAAAGTGTCT
 ACCCAGTTGAAGACAAACCTCACGAGTGTCAAAAGAACCCTGCAGATAAAGATGCTATTCATAATCACA
 TTCGTTTGTGTTGAACCTTGTGTTATAAAAGCTTTAAAACAGTACACGACTACAACATGTGTGCAAGTTACA
 GAAGCAGGTTTTAGATTTGCTGGCGCAGCTGGTTCAGTTACGGGTTAATTAAGTGTCTTCTGGATTAGAT
 CAGGTGTTTATTGGCTTTGATTGAAACAGTTTGAATACATTGAAGTGGGCCAGTTCAGGGAATCAGAGG
 CAATCATTCCAAACATCTTTTCTTCTTGGTATTACTATCTTATGAACGCTATCATTCAAAAACAGATCAT
 TGGAATCCTAAAATCATTGAGCTCTGTGATGGCATCATGGCCAGTGAAGGAAGGCTGTGACACATGCC
 ATACCGGCTCTGCAGCCATAGTCCACGACCTTTTGTATTAAGAGGAACAAATAAAGCTGATGCAGGAA
 AAGAGCTTGAAACCCAAAAAGAGGTGGTGGTGTCAATGTTACTGAGACTCATCCAGTACCATCAGGTGTT
 GGAGATGTTTCTTCTGCTGACGAGTGCACAAAGGAGAATGAAGACAAGTGAAGGAGGACTGTCTCGA
 CAGATAGCTGACATCATCTCCCAATGTTAGCCAAACAGCAGATGCACATTGACTCTCATGAAGCCCTTG
 GAGTGTAAAATACATTATTTGAGATTTTGGCCCTTCTCCCTCCGTCGGTAGACATGCTTTTACGGAG
 TATGTTCTGCACTCCAAACACAATGGCGTCCGTGAGCACTGTTCAACTGTGGATATCGGGAATTTCTGGCC
 ATTTTGGAGGTTCTGATTTCCAGTCAACTGAAGATATTGTTCTTCTCGTATTCAGGAGCTCTCCTTCT

CTC CGTATTTAATCTCCTGTACAGTAATTAATAGGTTAAGAGATGGGGACAGTACTTCAACGCTAGAAGA
 ACACAGTGAAGGGAAACAAATAAAGAAATTTGCCAGAAGAAACATTTTCAAGGTTTCTATTACAACCTGGT
 GGTATTCTTTTAGAAGACATTGTTACAAAAACAGCTGAAGGTGAAATGAGTGAGCAGCAACATACTTTCT
 ATTGCCAGGAAGTACAGTACTGCTAATGTGTCTGATCCACATCTTCAAGTCTGGAATGTTCCGGAGAAT
 CACAGCAGCTGCCACTAGGCTGTTCCGCAGTGATGGCTGTGGCGGAGTTTCTACACCCTGGACAGCTTG
 AACTTGGGGCTCGTCCATGATCACACCCACCCGGCCCTGGTGTCTGCTGGTGTGAGATACTGCTGC
 TTGTC AACCCACCCGACTACCGCTGGTGGGAGAAGTGCAGCAGACCCGAAAAGACACAGTCTGTCCAG
 CACAAAGTTACTTAGTCCCAGATGCTGGAGAAGAGGAGGATTCTGACTTGGCAGCCAAACTTGGAAATG
 TGCAATAGAGAAATAGTACGAAGAGGGCTCTCATTCTTCTGTGATTATGCTGTGCAGAACCTCCATG
 ACTCCGAGCACTTAACGTGGCTCATTGTAATCACATTCAAGATCTGATCAGCCTTTCCACGAGCCTCC
 AGTACAGGACTTCATCAGTGCCGTTTATCGGAAGTCTGCTGCCAGCGCCTGTTCCATCCAGGCAATTCAG
 TCTCGTTGTGAAAACCTTCACTCCAACCATGCTGAAGAAAACCTTTCAGTGTGGAGGGGATCCATC
 TCAGCCAGTGGGAGCTGTGCTCAGCTGTATGTGGACAGGCTTCTGTGCACCCCTTCCGTGTGCTGGC
 TCGCATGGTCGACATCCTTGCTGTGCGCGGTAGAAATGCTTCTGGCTGCAAAATACAGAGCAGCATG
 GCCAGTTGCCAATGGAAGAAGTCAACAGAATCCAGGAATACCTTCAGAGCAGCGGGCTCGCTCAGAGAC
 ACCAAAGGCTCTATTCCCTGCTGGACAGGTTTCGTCTCTCCACCATGCAAGACTCACTTAGTCCCTCTCC
 TCCAGTCTCTTCCACCCGCTGGACGGGATGGGCACGTGCTACTGGAACAGTGAAGTCCGGACAAGAGC
 TGGTACGTTTCTTGTCAAATCCCAGTGTGGACCAGGTGAGTCTGCACTGCTGGAAGTGCAGAGC
 TGGTGAATCGGATTCCTGCTGAAGATA GAATGCCTTCATGATGAACTCGGAGTTCAACCTAAGCCTGCT
 AGCTCCATGCTTAAGCCTAGGGATGAGTGAAATTTCTGGTGGCCAGAAGAGTGCCTTTTTGAAGCAGCC
 CGTGAGGTGACTCTGGCCGTGTGAGCGGCACCGTGCAGCAGTCCCTGCTGTCCATCATGTCTCCAGC
 CCGAGCTGCCTGCAGAGCCGGCGCCTACTGGAGCAAGTTGAATGATCTGTTGGGATGCTGCACATGTA
 TCAGTCCCTGCCACTCTGGCCCGGGCCTGGCACAGTACCTGGTGGTGTCTCCAAACTGCCAGCTGTA
 TTGCACCTTCTCTGAGAAAGAGAAGGACATTGTGAAATTCGTGGTGGCAACCCTTGAGGCCCTGTCTCT
 GGCATTTGATCCATGAGCAGATCCCGCTGAGTCTGGATCTCCAGGCAGGGCTGGACTGCTGCTGCCTGGC
 CCTGCAGTGCCTGGCCTCTGGAGCGTGGTCTCTCCACAGAGTTTGTGACCCACGCCTGCTCCCTCATC
 TACTGTGTGCACTTATCCTGGAGGCGTTCAGTGCAGCCTGGAGAGCAGCTTCTTAGTCCAGAAAAGAA
 GGACAAATACCCCAAAGCCATCAGCGAGGAGGAGGAAAGTAGATCCAAACACACAGAATCCTAAGTA
 TACTACTGCAGCCTGTGAGATGGTGGCAGAAATGGTGGAGTCTCTGCAGTCGGTGTGGCCTTGGGTGAT
 AAAAGGAATAGCGGCGTCCCGGCTTCTCACGCCATTGTAAGGAACATCATCATCAGCCTGGCCCGCC
 TGCCCTTGTCAACAGCTACACACGTGTGCCCCACTGGTGTGGAAGCTGGATGGTCAACCAAACCGGG
 AGGGGATTTTGGCACAGATTCCCTGAGATCCCGTGGAGTTCCTCCAGGAAAAGGAAGTCTTAAAGGAG
 TTCATCTACCGCATCAACACACTAGGCTGGACCAGTCTGACTCAGTTTGAAGAAACTTGGGCCACCTCC
 TTGGTGTCTGGTACGCAGCCCTCGTGATGGAGCAGGAGGAGAGCCACCAGAAGAAGACACAGAGAG
 GACCCAGATCAACGTCTGGCCGTGCAGGCCATCACCTCACTGGTGTGCTCAGTGCAATGACTGTGCCTGTG
 GCCGGCAACCCAGCTGTAAGCTGCTTGGAGCAGCAGCCCGGAACAAGCCTCTGAAAGCTCTCGACACCA
 GGTTTGGGAGGAAGCTGAGCATTATCAGAGGGATTGTGGAGCAAGAGATTCAAGCAATGGTTTCAAAGAG
 AGAGAATATTGCCACCCATCATTATATCAGGCATGGGATCCTGTCCCTTCTGTCTCCGGCTACTACA
 GGTGCCCTCATCAGCCACGAGAAGCTGCTGTACAGATCAACCCGAGCGGGAGCTGGGAGCATGAGT
 ACAAACTCGGCCAGGTGTCCATACACTCCGTGTGGTGGGGAACAGCATCACACCCTGAGGAGGAGGA
 ATGGGACGAGGAAGAGGAGGAGGAGGCCACGCCCTGCACCTTCGTACCAACCCACGTCTCCAGTCAAC
 TCCAGGAAACACCGGGCTGGAGTTGACATCCACTCCTGTTGCGAGTTTTTGTGAGTTGTACAGCCGCT
 GGATCCTGCCGTCCAGCTCAGCCAGGAGGACCCCGCCATCCTGATCAGTGAGGTGGTGCAGATCCCTTCT
 AGTGGTCTCAGACTTGTTCACCGAGCGCAACAGTTTGTGCTGATGTATGTGACGCTGACAGAACTGCGA
 AGGGTGCACCCCTCAGAAGACGAGATCCTCGTCACTGCTGCTGCCACCTGCAAGGCAGCTGCCG
 TCCTTGGGATGGACAAGGCCGTGGCGGAGCCTGTACGCCCTGCTGGAGAGCACGCTCAGGAGCAGCCA
 CCTGCCAGCAGGTTGGAGCCCTGCACGGCTCTCTATGTGCTGGAGTGCACCTGCTGGACGACACT
 GCCAAGCAGCTCATCCCGTTCATCAGCGACTATCTCTCTCAACCTGAAAGGGATCGCCCACTGGGTGA
 ACATTCACAGCCAGCAGCAGTACTGGTATGTGTGCCACTGCGTTTTACCTCATTGAGAATATCTCT
 GGACGTAGGGCCGGAATTTTTCAGCATCAATAATACAGATGTGTGGGGTGTGCTGTCTGGAAGTGAAGGAG
 TCCACCCCTCCATATTTACCCTGTGCCCTCAGAGGCTGGAGCGCCTCCTGCTCTGTGAGCAGCTCT
 CCCGCTGGATGCAGAATCGCTGGTCAAGCTGAGTGTGGACAGAGTGACGTGCACAGCCCGACCCGGC

CATGGCGGCTCTGGGCCTGATGCTCACCTGCATGTACACAGGAAAGGAGAAAGTCAGTCCGGGTAGAACT
TCAGACCCTAATCCTGCAGCCCCGACAGCGAGTCAGTGATTGTTGCTATGGAGCGGGTATCTGTTCTTT
TTGATAGGATCAGGAAAGGCTTTCCTTGTGAAGCCAGAGTGGTGGCCAGGATCCTGCCCCAGTTTCTAGA
CGACTTCTTCCCACCCAGGACATCATGAACAAAGTCATCGGAGAGTTTCTGTCCAACAGCAGCCATAC
CCCCAGTTCATGGCCACCGTGGTGTATAAGGTGTTTCAGACTCTGCACAGCACCAGGCGAGTCGTCCATGG
TCCGGGACTGGGTCATGCTGTCCCTCTCCAACCTCACGCAGAGGGCCCGGTCCCATGGCCACGTGGAG
CCTCTCTGCTTCTTTGTCAGCGCGTCCACCAGCCGTTGGTTCGCGGCGATCCTCCACATGTCATCAGC
AGGATGGGCAAGCTGGAGCAGGTGGACGTGAACCTTTTCTGCCTGGTCGCCACAGACTTCTACAGACACC
AGATAGAGGAGGAGCTCGACCGCAGGGCCTTCCAGTCTGTGCTTGAGGTGGTTGAGCCCCAGGAAGCCC
ATATCACC GGCTGCTGACTTGTTTACGAAATGTCCACAAGGTCACCACCTGC

ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTAA

Protein Sequence:

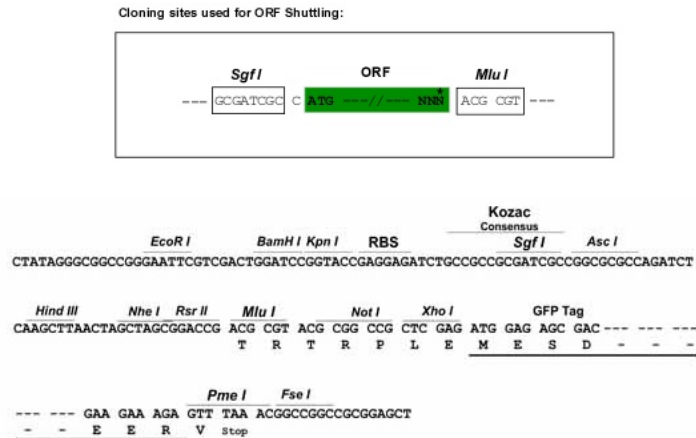
>RG218435 representing NM_002111
 Red=Cloning site Green=Tags(s)

MATLEKLMKAFESLSKSFQQQQQQQQQQQQQQQQQQQQPPPPPPPPPPQLPQPPQAQPLLPQPQP
 PPPPPPPGPAVAEPLHRPKKELSATKKDRVNHCLTICENIVAQSVRNSPEFQKLLGIAMELFLLCSSD
 AESDVRMVADECLNKVIKALMDSNLPRLQLELYKEIKKNGAPRSLRAALWRF AEL AHL VRPQKCRPYLVN
 LLPCLTRTSKRPEESVQETLAAAVPKIMASFGNFANDNEIKVLLKAFIANLKSSSPTIRRTAAGSAVSIC
 QHSRRTQYFYSWLLNVLLGLLVPVEDEHSTLLILGVLLTLRYLVPLLQQQVKDTSLKGSFGVTRKEMEVS
 PSAEQLVQVYELTLHHTQHGDHNVVTGALELLQQLFRTPPPELLQTLTAVGGIGQLTAAKEESGGRSRSG
 SIVELIAGGGSSCSPVL SRKQKGVLLGEEEALEDDSESRSVDVSSAL TASVKDEISGELAASSGVSTPG
 SAGHDIITEQPRSQHTLQADSVDLASCDLTSSATDGDEEDILSHSSQVSAVPSDPAMDNDGTQASSPI
 SDSSQTTTEGPDSAVTPSDSSEIVLDGTDNQYGLQIGQPQDEDEEATGILPDEASEAFRNSMALQQA
 LLKNMSHCRQPSDSSVDKFLRDEATEPGDQENKPCRIGDIGQSTDDDSAPLVHCVRLLSASFLLTGGK
 NVLVPDRDVRVSKALALSCVGAVALHPESFFSKLYKVPLDTTEYP EEQYVSDILNYIDHGD PQVRGAT
 AILCGTLICSI LSRSRFHVGDWMTIRT LTGN TFSLADCIPLLRKTLKDESSVTCKLACTAVRNCVMSLC
 SSSYSELGLQLIIDVLT LRNSSYWLVRTELLETLAEIDFRLVSFLEAKAENLRHGAHHTYGLLKLQERV
 NNVVIHLLGDEDPRVRHVAASLIRLVPKLFYKCDQGQADPVVAVARDQSSVYLKLLMHETQPPSHFSVS
 TITRIYRGYNLLPSITDVTMENNLSRVIAAVSHELITSTTRALTFGCCEALCLLSTAFPVCIWSLGHWC
 VPPLSASDESRSCTVGMATMILLSSAWFPLDL SAHQDALILAGNLLAASAPKSLRSSWASEEENPA
 ATKQEEVWPALGDRALVPMVEQLF SHLLKVINICAHVLDVAPGPAIKAALPSL TNPPSLSPIRRKGEK
 EPGEQASVPLSPKKGSEASAARSQSDTSGPVTTSKSSSLGSFYHLPSYLKLDV LKATHANYKVTLDLQ
 STEKFGGFLRSALDVL SQILELATLQDIGKCV EELG YLKSFCFSREPMMATVCVQQLKTLFGTNLASQF
 DGLSSNPSKSQGRAQLGSSSVRPGLYHYCFMAPYTHFTQALADASLRNMVQAEQENDTSGWFDVLQKVS
 TQLKTNLTSVTKNRADKNAIHNHIRLFEPLVIKALKQYTTTTTCVQLQKQVLDLLAQLVLRVNYCLLDS
 QVFIGFVLKQFEYIEVGFRESEAIIPNIFFLVLLSYERYH SKQIIGIPKIIQLCDGIMASGRKAVTHA
 IPALQPIVHDLFVLRGTNKADAGKELETQKEVVVSM LRLRIQYHQVLEMFILVLQQCHKENEDKWKRLSR
 QIADIILPMLAKQM HIDSHEALGVLNLT FEILAPSSLRPVDMLLRSMFVTPNTMASVSTVQLWISGILA
 ILRVLISQSTEDIVLSRIQELSFSPYLISCTVINRLRDGDSTSTLEEHS EGKQIKNLPEETF SRFLQLV
 GILLEDIVTKQLKVMSEQQHTFYCQELGTLMLCLIHIFKSGMFRRITAAATRLFRSDGCGGSFYTLDSL
 NLRARSMITTHPALVLLWCQILLLVNH TDYRWVAEVQQT PKRHSLSSTKLLSPQMSGEEEDS LAAKLGM
 CNREIVRRGALILFCDYVCQNLHDSEHLTWLIVNHIQDLISLSHEPPVQDFISAVHRNSAASGLFIQAIQ
 SRCENLSTPTMLKKTLCLEGIHLSQSGAVLTLYVDRLLCTPFRVLARMVDILACRRVEMLLAANLQSSM
 AQLPMEELNRIQEYLQSSGLAQRHQRLYSLDRFRLSTMQDLSLSPSPVSSHPLDGDGHVSL ETVSPDKD
 WYVHLVKSQCWTRSDSALLEGAELVNRIPAEDMNAFMNSEFNL SLLAPCLSLGMS EISGGQKSALFEAA
 REVTLARVSGTVQQLPAVHHVFQPELPAEPAAYW SKLNDLFGDAALYQSLPTLARALAQYL VVVSKLPSH
 LHLPEKEKDIVKFVVATLEALSWHLIHEQIPLSLDLQAGLDCCCLALQLPGLWSVVSSTEFVTHACSLI
 YCVHF ILEAVAVQPGEQLLSPERRTNTPKAISEEEEEVDPNTQNPKYIT AACEMVAEMVESLQSVLALGH
 KRNSGVPAFLTPLLRNIIISLARLPLVNSYTRVPPLVWKLGWSPKPGDFTAFPEIPVEFLQEKEVFKE
 FIYRINTLGWTSRTQFEETWATLLGVLVTQPLVMEQEE SPPEEDTERTQINVLAVQAITSVL SAMTVPV
 AGNPAVSCLEQQPRNKPLKALDTRFGRKLSIIRGIVEQEIQAMVSKRENIATHHLYQAWDPVPSLSPATT
 GALISHEKLLLQINPERELGSM SYKLGQVSIH SVWLGN SITPLREEEWDEEEEEADAPAPSPPTSPVN
 SRKHRAGVDIHS CSQF LLELYSRWILPSSSARRTPAILISEVVR SLLVVSDFTERNQFELMYVTLTELR
 RVHPSEDEILAQYLVPATCKAAAVLGMDKAVAEPVSRLLESTLRSSHLP SRV GALHGVLYVLECDLLDDT
 AKQLIPVISDYLLSNLKGIAHCVNIHSQQHVLV MCATAFYLIENYPLDVGP EFSASIIQMCGVMLSGSEE
 STPSIIYHCALRGLERLLLSEQLSRLDAESL VKLSVDRVNVHSPHRAMAALGLMLTCMYTGKEKVS
 SDPNPAAPDSESIVAMERVS VLFDRIRKGFPC EARVVARILPQLDDFFPPQDIMNKVIGEF LSNQQPY
 PQFMATVYKVFQTLHSTGQSSMVRDWMLSLSNFTQRAPVAMATWSLSCFFVSASTSPWVAAILPHVIS
 RMGKLEQVDVNLFCLVATDFYRHQIEEELDRRAFQSVLEVVAAPGSPYHRLLTCLRNHVHVTTC

TRTRPLE - GFP Tag - V

Restriction Sites:

Sgfl-MluI

Cloning Scheme:


ACCN: NM_002111

ORF Size: 9432 bp

OTI Disclaimer: Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.

The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)

OTI Annotation: This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

Reconstitution Method:

1. Centrifuge at 5,000xg for 5min.
2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
3. Close the tube and incubate for 10 minutes at room temperature.
4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.
5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.

RefSeq: [NM_002111.8](#), [NP_002102.4](#)

RefSeq Size: 13481 bp

RefSeq ORF: 9435 bp

Locus ID: 3064

UniProt ID: [P42858](#)

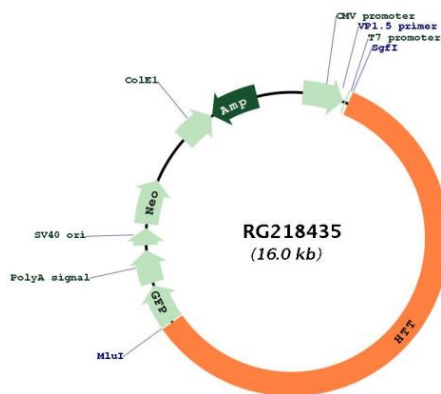
Cytogenetics: 4p16.3

Protein Families: Druggable Genome

Protein Pathways: Huntington's disease

Gene Summary: Huntingtin is a disease gene linked to Huntington's disease, a neurodegenerative disorder characterized by loss of striatal neurons. This is thought to be caused by an expanded, unstable trinucleotide repeat in the huntingtin gene, which translates as a polyglutamine repeat in the protein product. A fairly broad range of trinucleotide repeats (9-35) has been identified in normal controls, and repeat numbers in excess of 40 have been described as pathological. The huntingtin locus is large, spanning 180 kb and consisting of 67 exons. The huntingtin gene is widely expressed and is required for normal development. It is expressed as 2 alternatively polyadenylated forms displaying different relative abundance in various fetal and adult tissues. The larger transcript is approximately 13.7 kb and is expressed predominantly in adult and fetal brain whereas the smaller transcript of approximately 10.3 kb is more widely expressed. The genetic defect leading to Huntington's disease may not necessarily eliminate transcription, but may confer a new property on the mRNA or alter the function of the protein. One candidate is the huntingtin-associated protein-1, highly expressed in brain, which has increased affinity for huntingtin protein with expanded polyglutamine repeats. This gene contains an upstream open reading frame in the 5' UTR that inhibits expression of the huntingtin gene product through translational repression. [provided by RefSeq, Jul 2016]

Product images:



Circular map for RG218435